

# The Public Health Service Leprosy Investigation Station on Molokai, Hawaii, 1909-13—an Opportunity Lost

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LEPROSY HAS BEEN DESCRIBED in various writings since ancient times. Nearly 2,000 years ago, Chinese observers discussed clinical states that fit the picture of lepromatous leprosy so precisely that they could scarcely have been describing any other condition. Other ancient writings from the Far East would confirm the fact that leprosy has always been endemic to that part of the world.

Questions arise, however, as to the extent of leprosy in the Middle East in biblical times. Although it is entirely possible that sporadically persons with leprosy migrated there from Africa, archeological studies would suggest that the leprosy of Leviticus encompassed a horde of rather mundane conditions such as fungal infections, psoriasis, and acne.

During the Middle Ages, Europe was ravaged by an epidemic of leprosy that lasted for several centuries. It ultimately died out except for small endemic foci in Spain, Portugal, and Greece which persist to this day.

Leprosy was introduced to Hawaii about 140 years ago. Its



Surgeon General Walter Wyman

origin is uncertain, but it is generally believed that the disease began its spread from infected Chinese laborers imported to work on the plantations. Because of a high degree of susceptibility among the people of Hawaii, an epidemic developed which finally resulted in a decree by King Kamehameha V that called for the isolation of all victims of the disease. An inaccessible peninsula jutting out from the north side of the island of Molokai was selected, and the first patients were sent there in 1866. A settlement for leprosy patients still exists on the Kalaupapa Peninsula, but

its inhabitants are no longer under quarantine.

Walter Wyman, who served as Surgeon General of the Public Health and Marine-Hospital Service from 1891 to 1911, determined to make a concerted and scientific attack on leprosy. He commissioned three highly competent Public Health Service medical officers, Dr. Joseph H. White, Dr. George T. Vaughan, and Dr. Milton J. Rosenau to make the first nationwide study of its prevalence in 1901 (1). A total of 278 known cases of leprosy were tallied. Only 72 of the patients were isolated. At that same time, more than 850 cases existed in the Territory of Hawaii.

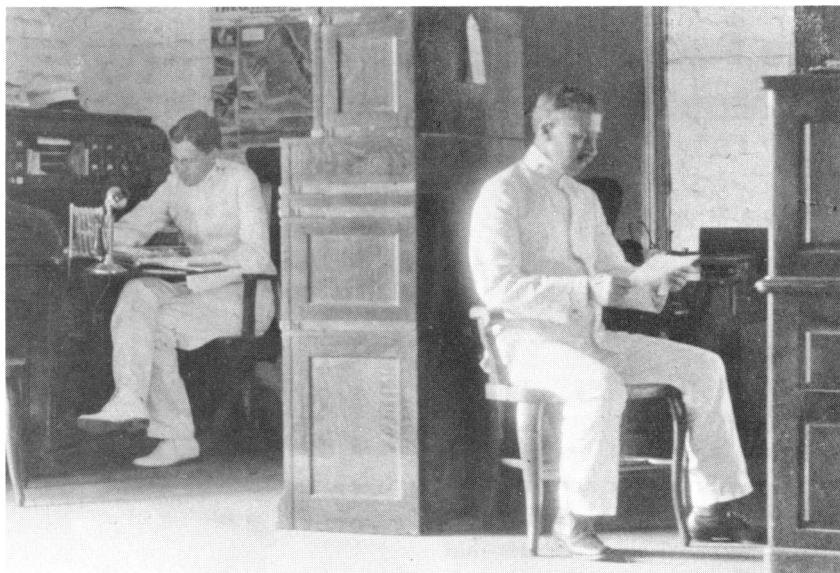
As evidence of the persistence of the social stigma that has complicated control of the disease until today, the medical officers reported that there was an inclination on the part of the patient as well as the patient's family and friends to conceal the affliction.

The report highlighted a high incidence of leprosy among immigrants to Minnesota from Sweden and Norway. Dr. Gerhard A. Hansen of Norway, who had discovered *Mycobacterium leprae* 25 years previously—giving the old malady the new name of Hansen's disease—was quoted as urging legal isolation as the best means of keeping the disease from spreading. This comment was to have far-reaching effects on the treatment of patients.

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**Dr. Leland Cofer, officer in charge of the Honolulu Quarantine Station**



**Pharmacist Frank Gibson (left) and Dr. Walter R. Brinckerhoff, the director, planning the Leprosy Investigation Station**

Louisiana for 6 years had maintained a leprosarium in Iberville Parish, at Carville, and had on its statute books a law requiring the commitment of lepers there. Research at that facility was later to have dramatic implications for leprosy treatment.

At about the same time that he commissioned a report on leprosy in the United States, Surgeon General Wyman sent Dr. D. A. Carmichael to the Hawaiian Islands to make a complete report on leprosy there. Dr. Carmichael described how this disease, imported into Hawaii, had spread through the islands, crippling and killing the susceptible islanders. He reported on the 1865 law which decreed that those with incurable cases must be segregated and how this was done on a particularly isolated small peninsula of Molokai. His successor, Dr. Leland E. Cofer, the Honolulu Quarantine Officer, described the scenically beautiful colony that had grown up on a spit of land jutting out into the sea below the high, steep cliffs of Molokai.

In 1904, the President of the

Hawaii Territorial Board of Health, Dr. Charles Cooper, set out a proposal to assist in handling the care of 856 lepers in a population of 154,000 in the Hawaiian Islands. He obtained the support of Governor E. Carter and the Congressional Delegate, Hawaiian Prince Kuhio Kalaniana'ole, to request support for a facility to study the cause and cure of leprosy.

President Theodore Roosevelt, in his Message to Congress on November 4, 1904, recommended that a hospital and laboratory be constructed in the Hawaiian Islands for the study of leprosy. Congress on March 3, 1905, passed a law appropriating \$100,000 for construction of these facilities and \$50,000 for their maintenance during the first year.

Dr. Cofer followed up on the congressional action and was soon able to advise the Surgeon General that the Hawaiian Legislature agreed to give the Public Health and Marine-Hospital Service 1 square mile of its leprosy reservation on Molokai for the construction of the Federal investigation station. Surgeon General Wyman

went to Hawaii in June 1905 to choose the site. An account of his visit there is contained in Dr. Cofer's handwritten Quarantine Station Log.

The Surgeon General arrived in Honolulu June 7, 1905, took up headquarters at the Alexander Young Hotel, and called on the Territorial Governor. Arrangements were made for the Wilder Company's steamer, *Likeli*, to take his party to Molokai on June 9, and return to Honolulu on June 11.

According to Dr. Cofer's log (2):

*This trip is the official beginning of the scientific study of leprosy by the United States, through Surgeon General Wyman and his Corps, the U.S. Public Health and Marine Hospital Service. It marks a new era in the medical history of leprosy, and will become a part of the important history of the United States.*

The Surgeon General's party included Congressman W. P. Hepburn of Iowa; Dr. Cofer, who had been instrumental in getting the bill for the leprosy investigation station passed; Governor Carter; W. O. Smith of Honolulu; R. E. Pinkham,

President of the Territorial Board of Health; four surveyors; and a number of military officials.

The leprosy patients got out their brass band to greet the Surgeon General at the early hour of 7:30 a.m. Saturday, June 10. Then Dr. Wyman traveled the length and width of the Molokai colony. On its western shore close to the cliffs lay the town of Kalaupapa, with white cottages and churches surrounded by stone or lava fences. The yards were planted with tropical fruits and flowers. On the eastern shore was the village of Kalawao, exposed to the full force of the usually prevailing trade winds, but with a wild, weird beauty of its own.

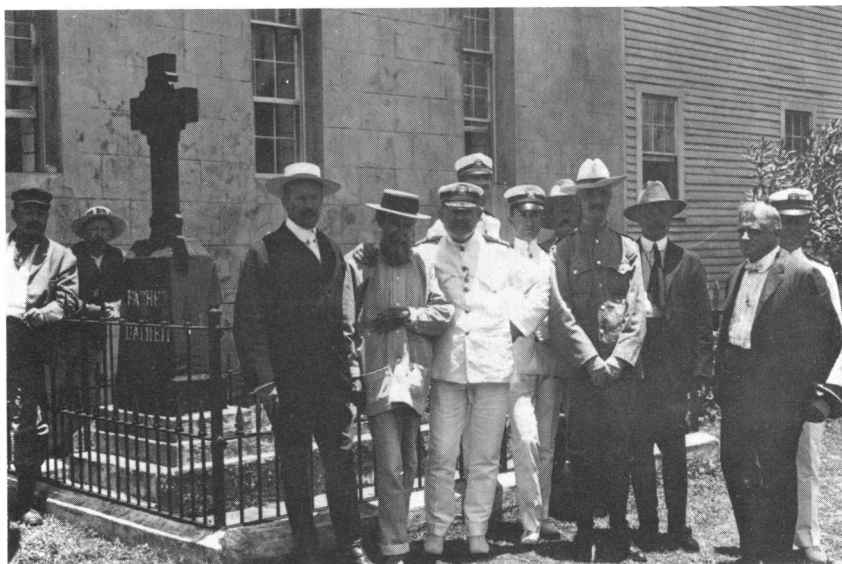
He selected a site at Kalawao, close to the foot of the cliffs. In describing this site in his journal, Cofer noted that it was "to the east of the Baldwin Home and the Romanish church but removed about 50 feet more or less from these places" (2).

The famed missionary Father Damien had added a wing to this church after he came to Molokai in 1873. He was buried there in 1889, having died of leprosy which he had developed years earlier after ministering to the patients in the colony. Later his body was removed to his native Belgium. (The church is still standing today.)

At the time of Dr. Wyman's visit, the body of Father Damien was in the churchyard tomb, and Brother Joseph Dutton, who had cared for him as he lay dying, had charge of the nearby Baldwin Home for boys who were patients.

According to the log (2):

*Surgeon General Wyman personally covered the ground (stepped off the boundary lines) of the selected site and gave some consideration to the location of the various groups of buildings. In the course of the day, the Baldwin Home for leper boys*



Surgeon General Walter Wyman with Brother Joseph Dutton, who had cared for the dying Father Damien, at Father Damien's tomb

*and the Bishop Home for leper girls were visited.*

*Surgeon General Wyman and party all mountain climbed to the summit of the extinct volcano Kauhako, and from this point, the whole peninsula was viewed and the relation of the selected site to the surrounding country noted.*

*After a day of much activity and thoughtful work, the party boarded the Likelike at 5:30 p.m. and returned to Honolulu, arriving at 10:20 p.m.*

On June 12, a banquet was held for the visiting dignitaries. Congressman Hepburn arrived late because he and his wife were enjoying the hospitality of their married daughter, a resident of Honolulu living on Lunalilo Street. She was happily married to Roy Chamberlain, a member of a prominent missionary family in Hawaii. This, in part at least, accounts for Congressman Hepburn's remarkable interest in Hawaii and leprosy.

The Congressman's remarks at the banquet were printed in the Pacific Commercial Advertiser (3):

*When you get to know Wyman as well as I do, you will recognize the fact that modesty is a great charac-*

*teristic of his nature. Next to myself, he is the most modest man I know of—(laughter)—and when he attempts to give me credit for carrying out this idea, it is simply because of his kindness. I have known the doctor a long time. I have been permitted to preside over the committee on interstate and foreign commerce for about 10 years. It is the committee which has the incentive with reference to all matters appertaining to his bureau. I might say here that the General never came to us with any proposition, personal to himself, his rank or his pay, all of that he has left to others. The subjects that have engaged his attention have been for the public weal. I know something of the persistency with which he adheres to every purpose looking to the common benefit. If the doctor ever came to us with the same persistency in personal matters that he does with matters for the public, I would say he would be a d----d bore. (laughter). When he came to see me with his bill, and told me it was for the public welfare, I did everything I could to get rid of the bill. That is the secret history of the measure. (applause and laughter).*

*I am glad of the opportunity the doctor has. Everything he has done in the past dozen years I have known him has been for the public interests*

*and has been well done. When he takes hold of a matter there is assurance of success. I anticipate that infinite good will come from this movement and those thousand and more unfortunates on Molokai, beyond the power of destruction by me, for when a man loses hope, and when all the good he can think lies behind him, he is deplorable indeed, and if there is any way to lift this cloud, it will indeed be a benefit to mankind. I hope for those thousand people, there will be a future for them and that hope will illumine them.*

*I want to say to you all how grateful I am for courtesies received. Every moment I have been on this beautiful island has been a pleasurable one. I have but one single thought that gives me discomfort—my absolute inability to get along with a language that has only eleven or twelve letters in it.*

*You have a beautiful city, and what pleases me most is that it is an American city. You will still find many cities in California, New Mexico, Arizona, Colorado, Florida and Louisiana that are not as Americanized as this little city here and I am glad to know it. There is a great chance of this American nation of ours being a great people if we can only have time, and there is a great possibility ahead for these little islands. No other spot that my eye has ever rested on has more beauty than the scene from the top of your mountain behind us (Tantalus). The view is incomparable but that landscape is no more beautiful than your climate or the spirit of Americanism.*

Representative Hepburn's flip-pant tone, his derision of the Hawaiian language, and his sense of the "Americanization" of Hawaii was not lost on the Hawaiians and the patients at Kalaupapa, who could also read the speech in the paper.

Dr. Walter R. Brinckerhoff of Harvard University was named director of the Leprosy Investiga-

tion Station to be constructed at Kalawao. In March of 1906, he went to Hawaii, stopping at the Public Health and Marine-Hospital Service inpatient facility in San Francisco for discussions with Pharmacist Frank Leighton Gibson, who was slated to take charge of the Leprosy Investigation Station building and equipment, as administrative officer.

Later in the year, Pharmacist Gibson and his young wife Emma joined Dr. Brinckerhoff, and together they set out to make this the most modern leprosy research laboratory in existence. Mrs. Gibson's book "Under the Cliffs of Molokai" gives us a glimpse of the Leprosy Investigation Station from 1906 to 1913.

"My husband," she wrote, "was to have charge of the building and equipment, the finances, and, in fact, all the executive part of the enterprise" (4). Pharmacist Gibson achieved a minor miracle—he got the station built.

Dr. Brinckerhoff, as Mrs. Gibson describes him, was "a tall, humorous man, full of ideals and a grim determination to succeed if possible in this mission" (4).

One of Hawaii's most distinguished historians in this general area, O. A. Bushnell, also described Brinckerhoff (5):

*Humorous and idealistic he may have been but Brinckerhoff seems to have been afflicted with at least three serious faults, which made him the wrong choice for the difficult job he was appointed to perform. He was a typical laboratory man, happier with a pathologist's specimens than with living people from whom those specimens were taken; and he was a typical unbending Yankee haole (Caucasian) who simply could not understand either native Hawaiians or those haoles who were members of the Territory's bureaucracy. In the jargon of today, he could not relate to patients or colleagues, he had no em-*

*pathy. Humor gave way to sourness, grim determination to impatience.*

*And, perhaps worse of all, he was so germ-conscious, so full of respect (if not of subconscious fear) for the horrors of leprosy and for the germ which causes the disease, that he imposed extremely rigorous precautions upon himself and his colleagues in order to protect them from infection. He was not necessarily terrified by leprosy, but certainly he allowed his good sense to be overwhelmed to the point where his precautions became offensive, as well as ridiculous.*

*More than likely, his habit of respect for germs was exacerbated by the company he kept. Being an eminent and eligible bachelor, he was drawn immediately into Honolulu's social life. At one of its elegant occasions, he became engaged to Miss Nellie White, sister of Mrs. James Castle, one of the dominant personages in local society. On August 21, 1906, Dr. Brinckerhoff and Miss White were married.*

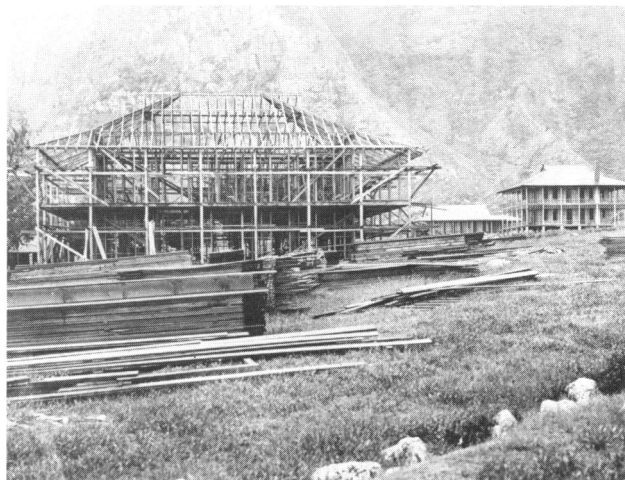
*Upon the announcement of her engagement, Miss White, a forthright, not very adaptable young lady, is reputed to have said that she would 'never never set foot upon that island' where her finance's duties were supposed to take him—and indeed where the federal government was planning to build him (as well as the Gibsons) a large and comfortable residence.*

Regardless of Mrs. Brinckerhoff's resolve, the homes for her and the Gibsons as well as the investigation station were being built and equipped. Mrs. Gibson described the difficulties and the joys (4):

*Every stick of lumber and bit of equipment had to be either floated ashore or loaded into small boats from the deck of the Mikahala or Iwalani, the interisland steamers. It was some enterprise to buy and check every piece of equipment, from heavy block and tackle to handling the heavy pieces of machinery for the ice machine and electric dynamo, down through lists*



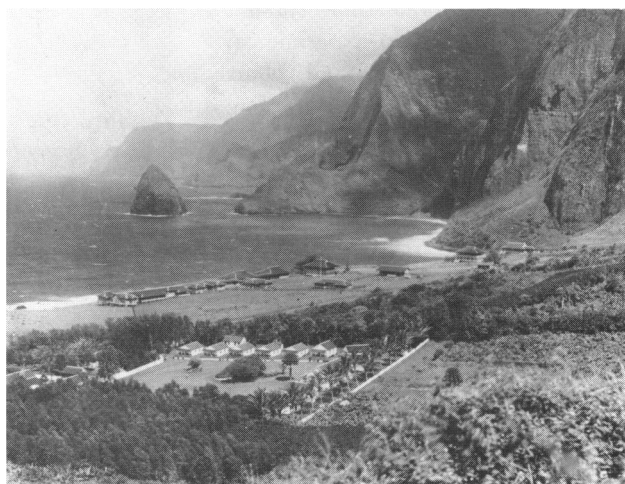
Survey and construction crew that helped to build the station



Staff quarters and the Gibson home under construction. Every stick of lumber and bit of equipment had to be brought to Kalawao by interisland steamer



Completed Gibson home with stone storage house at right, on July 6, 1909, the day the house was occupied. Wrote Mrs. Gibson, "we felt like Adam and Eve in Paradise with all the conveniences of civilization."



Leprosy Investigation Station with its three compounds—residence, executive, and hospital. The station was opened officially on December 23, 1909.

of linen, dishes, mules, garden seeds and all the delicate laboratory equipment. The U.S. Leprosy Investigation Station at Kalawao had one of the most complete laboratory outfits in the world.

Uncle Sam furnished us with the best of everything: fine linen, good furniture, Haviland dishes, silver, electric lights, ice, our own water system and even a Jersey dairy cow and a flock of chickens. The 32 Chinese were detailed to help us at first, but by and by we did not need so many. . . . Everything had been thought of. The floor of our house was painted black, like a piano top,

so to soften the glare of the reflection from the ocean. . . . We were very comfortable indeed; the upstairs lanai was furnished with hammocks, chairs, and couches; French doors opened from each room into a lanai; electric fans were supplied but seldom used because of the fresh breezes wafting from the ocean. . . . Indeed, we felt like Adam and Eve in Paradise with all the conveniences of civilization, besides a private post office.

Dr. Bushnell described the construction in another way (5) :

The architects in Washington, stinting nothing, had produced plans for a great institution—by far the biggest complex yet erected in Hawaii. The buildings themselves, designed in the prevailing bureaucratic-baroque style of the day, were huge, airy, high-ceilinged edifices, encircled by wide verandahs held in place by numerous slender pillars—a mainlander's idea of a southern planter's mansion transplanted to the sunny, languid tropics. Identical structures were built by the American government in Cuba, Puerto Rico, the Canal Zone, the Philippines—and in Honolulu, at Fort Shafter,



where some of them (now much modified) still survive. The old Tripler General Hospital at Fort Shafter, destroyed about 1955, was a splendid example of this rather grand, very romantic, and yet indubitably family-style architecture of that imperial age.

The station was divided into three compounds: residence, executive, and hospital. The residence section included individual homes for the staff and was separated from the patients by a double row of fencing. No patients were ever to cross that barrier. The administrative compound had office space and laboratories, storehouses, icehouses, barns, and accommodations for the animals to be used in experiments. The hospital had individual rooms for 40 patients—unfortunately, few would ever be used.

Fed from the watershed of upper Molokai beyond them, the high cliffs above the station furnished an ample supply of water under gravity pressure. The laboratory even had an elaborate electric system which turned out artificial ice.

Before the station was ready for occupancy, Dr. Brinckerhoff made his decision to “do his work” at the Kalihi Hospital or Leprosy Receiving Station near Honolulu. He and his wife never moved into their quarters on Molokai, for when their son Nelson was born in 1909, Nellie died. Dr. Brinckerhoff was never the same. He continued to work on leprosy in Honolulu until April 15, 1910, when he resigned from the Service and moved to the mainland, where he died (6).

Dr. Donald H. Currie, who had been for 2 years on special duty in Honolulu, was assigned on May 31, 1909, as director of the Molokai Leprosy Investigation Station. The big new station still was not ready for occupancy, and Dr. Currie continued Dr. Brinckerhoff's studies on the people being treated at the Kalihi Receiving Station on Oahu.



*Kalihi Leprosy Hospital on Oahu where Dr. Brinckerhoff worked*

In the meantime, the Gibsons moved into their newly built private home on Molokai on July 6, 1909. While they lived there a son, Alfred, was born. Alfred Gibson, a retired lawyer and judge, lives in California. He is married to Edith Foster, the daughter of another Public Health Service officer, Dr. Albert A. Foster.

Only nine of the hundreds of patients on Molokai volunteered as hospital patients when the station was formally opened by Dr. Currie on December 23, 1909. No others ever came. Mrs. Gibson explained what happened to the nine (4):

*Unused as they were to the restrictions of hospital life, they had little liking for it and proved uncooperative. They rebelled against the rigor of the treatments and the confinement of living within the grounds after the unlimited freedom offered by the settlement. . . . One by one the volunteer patients left, not*

*caring to take the treatments and preferring a freer life in Kalaupapa. When the last one departed, the authorities in Washington decided to close the station.*

On October 23, 1911, Dr. George W. McCoy, later to bring the National Institute of Health to prominence, took over as director of the Leprosy Investigation Station on Molokai from Dr. Currie. It was McCoy who closed the station along with Mr. Gibson on August 7, 1913.

The buildings lay empty and unused and, as Dr. Bushnell put it, that may have been another great tragedy (5).

*Meanwhile, ironically, the passage of time and changes in personnel, and therefore in personalities among both lepers and Territorial physicians, were diminishing the old prejudices of lepers against segregation and treatment by federal scien-*



Only the chimney and some concrete foundations remain. Station was closed in 1913, and the buildings taken down in 1929

tists. Or so thought Dr. J. T. McDonald, one of the physicians at Kalihi:

. . . The old fear of the 'federal doctors' when the work of the Leprosy Investigation Station began gradually gave way to the kind and tactful administrations of the successive medical officers of the Public Health Service in the past, until today the medical attendant flatters himself that he enjoys the most implicit confidence and heartiest cooperation of his patients . . .

Perhaps even then the station at Kalawao might have been reopened and put to proper use by the Board of Health if not by the USPHS men. But by that time no one in either group thought to suggest such a course of action.

In September 1922, the Congress deeded the land back to the Territory of Hawaii. A year later, the Territorial Legislature appropriated \$12,000 to take down the station and finally in 1929, 20 years after it was opened and 16 years after it was closed, the building materials were "liberated" and can now be found as part of the homes of Kalaupapa. All that remains are the concrete piers upon which the buildings once stood.

What caused this misuse of resources, what was the result, and is there a useful lesson?

Many people now believe that

there were four reasons for the failure:

1. The lack of communication between the white scientists and the residents of Kalaupapa—a gulf so wide that neither patient nor health professional could bridge it.

2. The native Hawaiians' resentment of their incarceration and their lack of fear of leprosy obviously were not shared by the health professionals attending them.

3. The overlay of resentment by many islanders of the high-handed annexation of Hawaii and the takeover of land at Kalawao by the Public Health and Marine-Hospital Service.

4. An irrational but understandable concern, which exists today, that patients were being used as experimental animals to learn more about leprosy to help people somewhere else—not in Hawaii.

At least one result was the possible delay in the discovery of an effective treatment for leprosy.

In 1946, Surgeon General Thomas Parran was enabled, by a curious combination of circumstances, to announce a truly new era in the treatment of leprosy. The experiments started in 1941 by Dr. Guy Faget in the leprosarium at Carville were showing remarkable results. The 1946 annual report of the Surgeon General stated that 37 patients were discharged from Carville because of arrested disease—about twice as many as in several proximal years. Dr. Parran hailed this statistic as the good results of sulfone therapy for leprosy and noted, "For the first time in the history of leprosy, it is now possible to bring hope to its victims. There is now hope, furthermore, that by diagnosis at an early stage and immediate treatment with the sulfones, it will be possible to arrest the disease within a comparatively short time" (6).

In 1947 a small supply of sulfone

from Carville was made available to Hawaii, and it was used on those patients who were deteriorating rapidly, particularly those who were going blind. After about a year, the results were so encouraging that the drug was offered to all patients.

Was this truly an opportunity lost in those years from 1909 to 1946? Many would say "yes." An all too common emphasis on technology without a concomitant emphasis on the important human dynamics of communication, patient education, and behavior change led to wasted resources and inadequate treatment.

What is past should be prolog to the future. We must be careful not to repeat history because of an undue preoccupation with technology that could delay solutions to current problems in cancer, heart disease, accidents, and mental disorders. Let us not lose our concern for humanity in our striving for knowledge.

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